

TYPE SPECIMENS OF THE HODGDON HERBARIUM,  
UNIVERSITY OF NEW HAMPSHIRE<sup>1</sup>

C. THOMAS PHILBRICK  
AND GARRETT E. CROW

In an effort to catalog the type specimens of the Hodgdon Herbarium all materials in type folders were reevaluated as to type status. The following totals are reported: 5 holotypes, 70 isotypes, 13 syntypes, 6 paratypes, and 1 cotype.

In 1969 the Parker Cleaveland Herbarium of Bowdoin College, Brunswick, Maine, came to the University of New Hampshire on a long term loan and was incorporated into the herbarium collection. Hehre, Hodgdon, and Pike (1972) reported on this collection and noted it included a large number of specimens collected by Augustus Fendler in New Mexico in 1847, many of which are isotypes, and a large number of specimens collected by Ferdinand Lindheimer in Texas in 1843 and 1845. Thus the entire herbarium was searched for additional Fendler and Lindheimer collections which may have been overlooked as type material. The search turned up 231 Fendler specimens, 67 of which are types and 60 Lindheimer specimens, 8 of which are types. Original descriptions were examined to verify all type material.

Many of the types among the Fendler collections were cited by Asa Gray for new species he described in *Plantae Fendlerianae* (Mem. Amer. Acad. Arts, vol. 4, 1849). Dr. Elizabeth Shaw of the Gray Herbarium kindly pointed out a problem regarding numbers appearing on Fendler specimens. Apparently, upon receiving collections from Fendler, Gray divided the specimens into duplicate sets for distribution, using his own distribution numbers on these labels, not Fendler's collection numbers. He also cited these distribution numbers with his descriptions of new species. Dr. Shaw graciously allowed us to examine Fendler's original notebooks to help clarify the problem.

The confusion which has arisen with regard to the numbers appearing on Fendler specimens is due to the numbering practices employed by Gray (1849) during the preparation of *Plantae Fendle-*

---

<sup>1</sup>Scientific Contribution Number 986 from the New Hampshire Agricultural Experiment Station.

*rianae*. Comparison of Fendler's notebooks with *Plantae Fendlerianae* reveals that initially Gray did not use the numbers from these notebooks as specimen label numbers or in protologs. Instead, he substituted these notebooks numbers with his own numbering sequence (*Plantae Fendlerianae* numbers) which also served as distributional numbers for the specimens. This substitution by Gray continued up to the beginning of the Compositae. After this point Gray discontinued the use of *Plantae Fendlerianae* numbers as distribution numbers on specimen labels and in protologs, using Fendler's notebook numbers instead. Gray footnotes this change, but fails to note the discrepancy between the *Plantae Fendlerianae* numbers and the Fendler notebook numbers (Figure 1).

The three different numbers which are encountered when dealing with taxa described from Fendler's specimens in *Plantae Fendlerianae* are as follows:

1) *Fendler notebook numbers*: Fendler's specimen numbers which were included in the notebooks sent to Gray along with the specimens (Figure 2). It is doubtful that these are Fendler's actual field collection notebooks since the specimens are numbered and arranged sequentially by family and the numerical order of the specimens does not correspond with the chronology of collection dates in the notebooks.

2) *Plantae Fendlerianae numbers preceding the Compositae (Nos. 1-295)*: Numerical sequence of species in *Plantae Fendlerianae* (Figure 3). In preparing the original descriptions these numbers were used as specimen distribution numbers instead of Fendler notebook numbers.

3) *Plantae Fendlerianae numbers after the beginning of the Compositae (Nos. 296-462)*<sup>1</sup>: These numbers, starting with No. 296, continue the numbering sequence in *Plantae Fendlerianae* (Figure 5). These differ, however, in that Gray began using Fendler notebook numbers on specimen labels instead of the *Plantae Fendlerianae* numbers and cited them, in parentheses, with the description of each taxon (Figure 1).

---

<sup>1</sup>Specimens with distribution numbers from 463 onward were not cited with taxa included in *Plantae Fendlerianae*. These numbers correspond with Fendler notebook numbers.

Information on the labels which Gray distributed with the Fendler specimens is very brief (Figures 4 & 6). The information supplied by Fendler in his notebooks, however, is much more complete, often describing the precise collection locality for each specimen (Figure 2).

Another problem arose when it was discovered that, in some cases, Gray combined two or more of Fendler's collection numbers to form a single distribution number. Consequently, when Gray described a new species he cited only the distribution number and not Fendler's collection numbers. Because of this, the actual Fendler collection number for a type specimen cannot be determined from the original descriptions of certain species.

Since Gray usually based descriptions of new species on specific Fendler collection numbers this lumping is a problem in only a few cases. Gray's occasional practice of combining collections can be observed by examining Fendler's notebooks, in which Gray marked his own distribution number next to Fendler's collection numbers.

In those cases in which Gray did combine several collection numbers to form a single distribution number there seems to be no way of determining which specimens relate to specific Fendler collection numbers. Apparently when Gray described a new taxon he based his description on all the collections he combined under a single distribution number. It is possible that Gray also assigned distribution numbers when making up sets of Lindheimer specimens, just as he did with the Fendler collections, but this has not been confirmed.

In 1970 the herbarium of the Portland Society of Natural History, Portland, Maine, came to the University of New Hampshire on a permanent loan. Several isotypes of taxa described by Fernald were included in this collection.

The following is a list of all type material located in the Hodgdon Herbarium. Cases of lumping of collection numbers by Gray are noted.

Specimens of the Parker Cleaveland collection of Bowdoin College are identified as PCBC, those of the Portland Society of Natural History are identified as PSNH and those of the Hodgdon Herbarium are identified as NHA. However, the collections of PCBC and PSNH are regarded as an integral part of the Hodgdon Herbarium and any of these specimens cited in publications should be designated as NHA.

## PLANTÆ FENDLERIANÆ.

61

eels about one fourth, of an inch long. I am not sure that the root is annual. The character of *G. Mexicanum*, *H. B. K.*, agrees pretty well with this plant, except that the leaves of that species are in eights.

† 290. *CEPHALANTHUS OCCIDENTALIS*, *Linn.* Council Grove, &c.

291. *HEDYOTIS (HOUSTONIA) RUBRA*. (*Houstonia rubra*, *Car. Ic. 5. t. 474*; *Benth. Pl. Hartw. p. 15.*) Foot of dry, gravelly hills, seven miles southwest of Santa Fe; May. Flower bluish-red. — This plant is diœcio-dimorphous in the same manner as *H. carulea* (*cf. Torr. & Gray, Fl. 2. p. 38*). Lindheimer and Wright have also gathered the plant in Texas.

† 292. *H. (AMPHIOTIS) STENOPHYLLA*, *Torr. & Gray, Fl. 2. p. 41*. Prairie, between McNees Creek and Cold Spring, of the Cimarron; August.

## VALERIANACEÆ.

293. *VALERIANA EDULIS*, *Nutt. in Torr. & Gray, Fl. 1. p. 48*. Elevated, rocky region from Las Vegas to the Mora River; Aug. — The root of this plant furnishes the principal article of food of the "Root-diggers" of the country around the Great Salt Lake, &c. Dr. Torrey assures me that the *V. ciliata*, *Torr. & Gray*, of Canada and the Western States, is the same species; and these specimens, which show the ciliate leaves, confirm that view. The plant is subdiœcious, as was long since remarked by Mr. Sullivan.

294. *V. SYLVATICA*, *Richards. Appx. Frankl. Journ. ed. 2. p. 2*; *Torr. & Gray, Fl. 2. p. 47*. Rocky and shady declivities, along Santa Fé Creek; April and May, in flower; June, in fruit.

## COMPOSITE.

† 295. *VERNONIA NOVEBORACENSIS*, *Willd., var.* Ford of the Arkansas; September.

296. *PECTIS (PECTIDOPSIS, DC.) ANGUSTIFOLIA*, *Torr. in Ann. Lyc. N. Y. 2. p. 62*. Between Santa Fé and Pecos; Aug. (535.)\* — Fine specimens of this rare plant were gathered on the Upper Arkansas by Fremont, in his second expedition, and by Lieut. Abert. It has a true *pappus coroniformis*.†

\* From this onward, the numbers inclosed in parentheses, and usually placed after the habitat, are those under which the specimens have been distributed.

† The pappus in the *Eupectidea* presents such numerous variations and gradations, that it will be necessary either to introduce several additional genera, undistinguishable in habit, or to extend the character of *Pectis*, and restore to it *Pectidopsis*, *Pectidiom*, and perhaps *Lorentea* also. Considering the latter to be the proper mode, I have two additional subgenera to propose, with some new species, viz.: —

Figure 1. A page from *Plantae Fendlerianae*: nos. 290-295 do not correspond with Fendler notebook numbers, but appear on the specimen labels; no. 296 continues the numbering sequence but does not appear on the specimen labels; no. (535) cited under no. 296 corresponds with the Fendler notebook number and also appears on the specimen labels.

292 *Hedyotis strobilifera*  
 Salinas 20: August 1847. Salinas  
 Herbar. creek and Council Grove  
 (Carmichael). Same as 291

292 the same as last  
 19: August 1846 Council Grove on  
 hills in crevices of rocks.

Calceariaceae.

293. *Valeriana edulis*, Nutt.  
 1 15-18: August 1847. Vegas to  
 More River (San Mateo). Elevated  
 rocky region.

294. *V. sylvatica*, Richard  
 1 20: April - 20: May 1847. Santa  
 Fe Creek. foot of mountains,  
 shady slope declivities, rich soil  
 in crevices of the rocks.  
 Stems branchlets each pair at  
 right angles to the next pair below  
 or above. Inflorescences compound.  
 Each flower branchlet is subtended  
 by a bract.  
 Sepals 5, white, colour, nearly white  
 30: June 1847. in fruit.

Compositae.

295  
*Hemionia nevadensis* var.  
 27 Sept 1847. Ford of the Salinas  
 section below last

296 297  
*Liatris punctata*, Hook.  
 1 17-18: August 1847. San Miguel  
 in the low San Bernardino range.

*Liatris punctata*, Griseb.  
 19 August 1846. Turkey point,  
 prairie. Leaves larger and more  
 narrow. Bracts of the flowers not  
 pointed.

The same as last  
 1 30: August - 15: Sept 1847.  
 Salinas Creek to Cottonwood Creek.  
 Very prairie. Flowers spikes more  
 crowded, bracts of the flowers  
 more acuminate.  
 The flowers of the flowers white.

300 *L. spicata*.  
 25: August 1847. Middle Spring  
 (Carmichael). Low prairie.  
 Plant 4-6 feet high.

301  
*Liatris pycnostachya*  
 11: August 1846 18 miles south of  
 Fort Leavenworth; dry prairie

298 *L. squarrosa* *L. intermedia*.  
 15: Sept 1847. Prairies between  
 Turkey in and Cottonwood Creek.

297. *L. squarrosa* Nutt.  
 11: August 1846 8 miles south  
 of Fort Leavenworth.

302. *L. leucisa*.  
 1 18: August - 10: Sept 1847-48  
 Region about Council Grove and  
 Fort Leavenworth; high prairie.

*Liatris scariosa* *ramosa*  
 11: Sept 1847. Council Grove;  
 high prairie. Inflorescence  
 different from the preceding one.

*Tetradymia inermis*,  
 26: July 1847. Santa Fe; sunny  
 side of a hill. A shrub 2 feet high  
 the only one shrub of this kind  
 seen by me.

306 *Brickellia grandiflora*,  
 27-28 August 1847. Near Rock  
 Creek; steep rocky side of a  
 ravine.

*Pupatorium aegrotoides*,  
 18: Sept 1847. Council Grove,  
 Creek bottom.

*E. populeata*  
 14: Sept 1847. 8 miles south  
 of Fort Leavenworth; low prairie.

*E. purpureum*  
 23: Sept 1847. Creek bottom;  
 North of Kansas river.

299  
*Blaviera brachyphylla*,  
 17: August 1847. 2 miles east  
 of More River (San Mateo); foot  
 of high rocks.

Figure 2. A page from Fendler's notebook.

## TYPES

## ACANTHACEAE

**Dipteracanthus nudiflorus** Engelm. and Gray. Boston J. Nat. Hist. 5: 229. 1845. "Near Houston, Texas," *F. Lindheimer 157* (1843). PCBC. ISOTYPE.

## ALISMATACEAE

**Lophotocarpus spathulatus** J. G. Smith. Mo. Bot. Garden Eleventh Rept. p. 149–150. 1900. "Merrimack River, Newburyport, Massachusetts." *A. A. Eaton s.n.* September 1898. NHA. ISOTYPE.

## APIACEAE

**Thaspium montanum** Gray. Mem. Amer. Acad. Arts 4: 57. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 276. PCBC. ISOTYPE.

## AQUIFOLIACEAE

**Ilex verticillata** (L.) Gray var. **verticillata** forma **hodgdonii** Seymour. Flora of New England, p. 377. 1969. "Northern side of Oyster River, toward its mouth, Durham, Strafford Co., New Hampshire." *A. R. Hodgdon 6637* (7 July 1950). NHA. HOLOTYPE.

## BERBERIDACEAE

**Berberis fendleri** Gray. Mem. Amer. Acad. Arts 4: 5. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 15. PCBC. ISOTYPE.

## BORAGINACEAE

**Eritrichium multicaule** Torr. U. S. and Mexico Boundary Survey p. 140. 1858. "New Mexico." *A. Fendler*, 1847, Distr. no. 636. PCBC. ISOTYPE.

**Mertensia fendleri** Gray. Amer. J. Sci. II 34: 339. 1862. "New Mexico." *A. Fendler*, 1847, Distr. no. 625. PCBC. ISOTYPE.

## COMPOSITAE

**Actinella argentea** Gray. Mem. Amer. Acad. Arts **4**: 100. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 457. PCBC. ISOTYPE (2).

**Actinella richardsonii** Nutt. var. **floribunda** Gray. Mem. Amer. Acad. Arts **4**: 101. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 460. PCBC. ISOTYPE (2)

**Antennaria marginata** Greene. Pittonia **3**: 290. 1898. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 523. PCBC. SYNTYPE.

**Bidens tenuisecta** Gray. Mem. Amer. Acad. Arts **4**: 86. 1849. "Between Bent's Fort and Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 449. PCBC. ISOTYPE

**Brickellia fendleri** Gray. Mem. Amer. Acad. Arts **4**: 63. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 347. PCBC. ISOTYPE.

**Erigeron cinereum** var.  $\alpha$  Gray. Mem. Amer. Acad. Arts **4**: 68. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 374. PCBC. SYNTYPE (2).

**Senecio fendleri** Gray. Mem. Amer. Acad. Arts **4**: 108. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 478. PCBC. SYNTYPE.

## CRUCIFERAE

**Arabis holboellii** Hornem. var. **fendleri** Watson. Gray's Synoptic Flora **1**: 164. 1895. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 27. PCBC. SYNTYPE.

**Cardamine cordifolia** Gray. Mem. Amer. Acad. Arts. **4**: 8. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 28. PCBC. ISOTYPE.

**Cardamine longii** Fern. Rhodora **19**: 91. 1917. "Valley of Cathance River, shaded rocky-pockets and crevices, covered at high tide, Bowdoinham, Sagadahoc Co., Maine." *Fernald and Long 13698*. PSNH. ISOTYPE.

## PLANTÆ FENDLERIANÆ.

5

- † 10. DELPHINIUM AZUREUM, *Michx.* Between Bent's Fort and Santa Fé; in bottoms.  
 11. D. AZUREUM, var. with greenish blue flowers. Banks of the Mora River.  
 12. ACTEA RUBRA, *Willd.* Damp, shady places in the mountains around Santa Fé.  
 13. THALICTRUM FENDLERI (*Engelm. Mss.*): dioicum; foliis petiolatis; petiolulis primariis brachiatis vel refractis stipellatis; foliolis cordato-rotundatis trilobis; filamentis apice vix incrassatis; antheris setigero-mucronatis; carpellis sessilibus oblique ovatis complanatis costatis carinato-alatis stylo recurvo triplo longioribus; cæt. fere T. Cornuti. — With the last. (T. Cornuti, of which a few specimens gathered on the Mora River were distributed with this species, has the fruit terete, with the prominent ribs all equal.)

## BERBERIDACEÆ.

14. BERBERIS (MAHONIA) AQUIFOLIUM, *Pursh, Fl. 1. p. 219. t. 4.* Mountains; upper part of Santa Fé Creek. "Calyx 6-bracteolate." *Engelm.*

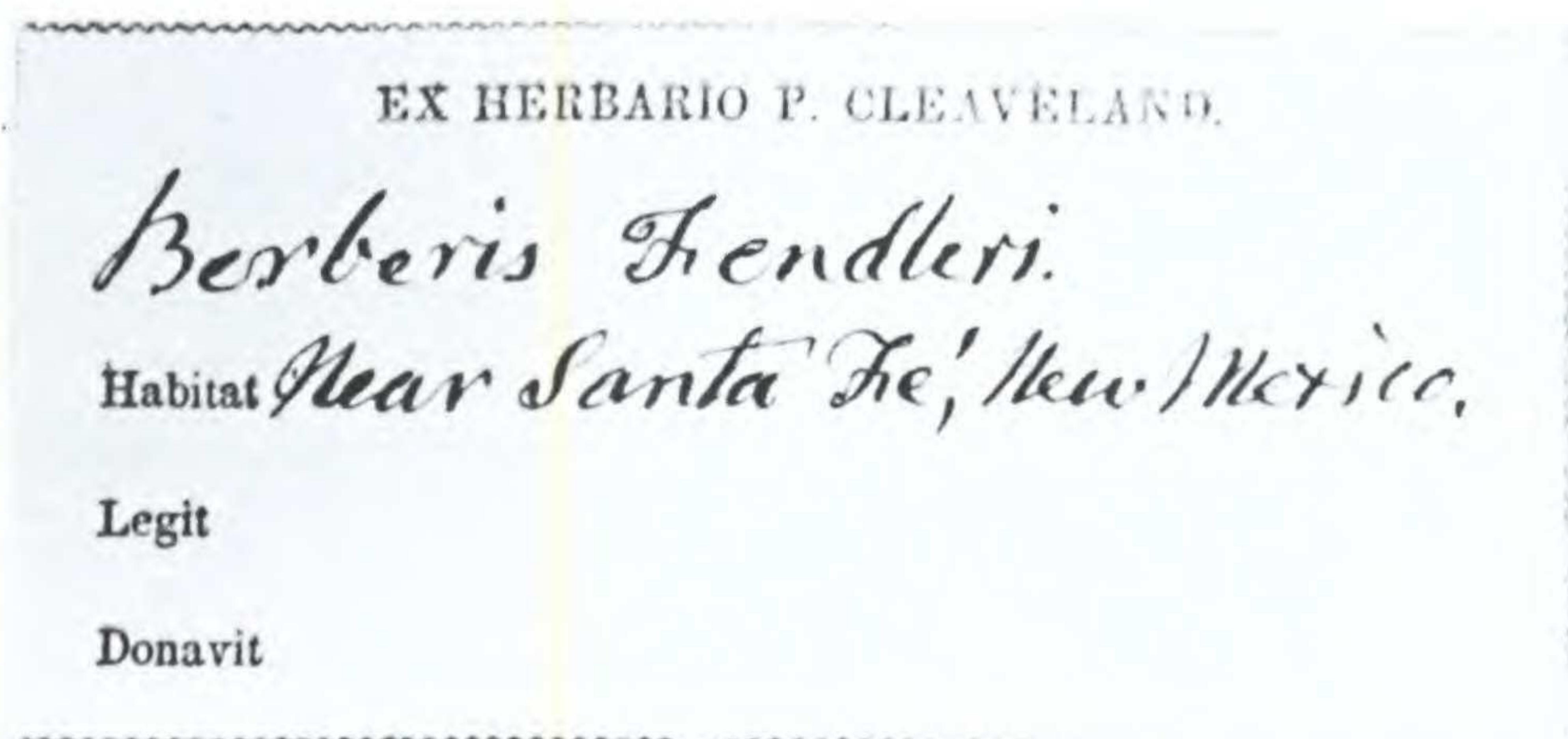
15. BERBERIS FENDLERI (sp. nov.): nitidissima; ramis vernicosis; spinis 3-5-partitis; foliis oblanceolatis oblongisve muticis subintegerrimis utrinque lucidis; racemis pendulis densifloris folia multo excedentibus; bracteolis calyculi sepalis dimidio brevioribus; petalis acutiusculis; baccis immaturis subglobosis 2-3-spermis. — Santa Fé Creek, at the foot of steep and rocky banks, near the water. Shrubs three to four feet high, flowering at the end of May. — A beautiful and very distinct species, allied to *B. Canadensis*; but with the numerous and crowded golden flowers fully as large as those of *B. vulgaris*: the conspicuous calyculate bractlets tinged with red or pink. Branches brown, remarkably smooth and shining, as if varnished. The leaves are also lucid; those of the clusters from 6 to 18 lines long, and quite entire, or with few obsolete teeth; but the cauline appear to be sparingly spinulose-serrate.

## PAPAVERACEÆ.

16. ARGEMONE HISPIDA (sp. nov.): radice perenni; caule crasso foliisque profunde pinnatifidis pube brevi cinerea undique tectis et (nervis marginibusque præsertim) setosissimis; calyce aculeato; corolla alba maxima; capsula cylindrica (2-unciali) acutata spinis validis setisque horrida. — Low, sandy places around Santa Fé; the stems 1 to 2 feet high, growing socially in great numbers; June, July. (Also on the Upper Arkansas, &c., *Fremont, Wislizenus.*) — The flower is 3 or 4 inches in diameter, and accords with Dr. Lindley's figure of *A. grandiflora*, excepting the prickly calyx. That is a glabrous plant, while ours is not only densely setose, but is hoary throughout with a short and close hirsute pubescence. The pod is covered with very strong spines, of which the larger are often branched, and also with smaller prickles and a hoary and bristly pubescence. *A. Mexicana* was also collected, in two forms.

Figure 3. A page from *Plantae Fendlerianae* prior to Compositae (cf. specimen label in Figure 4).





Plantae Novo-Mexicanae.

No. 15.

*Berberis Fendleri.*

A. Fendler coll.

1847.

Figure 4. Specimen label showing *Plantae Fendlerianae* number, not corresponding with Fendler's notebook number (cf. Figure 3).

**Draba aurea** var. **stylosa** Gray. Amer. J. Sci. II **33**: 242. 1862. *Draba neomexicana* Greene. Pittonia **4**: 18. 1899. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no 43. PCBC. ISOTYPE (2).

**Lesquerella alpina** Watson var. **intermedia** Watson. Gray's Synoptic Flora **1**: 117. 1895. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 38. PCBC. ISOTYPE (2).

## CYPERACEAE

**Carex fendleriana** Boeckeler. Linnaea **39**: 135. 1875. "New Mexico." *A. Fendler*, 1847, Distr. no. 878. PCBC. ISOTYPE.

**Cyperus fendlerianus** Boeckeler. Linnaea **35**: 520. 1867–1868. "New Mexico." *A. Fendler*, 1847, Distr. no. 865. PCBC. ISOTYPE.

## ERICACEAE

**Daphnidostylis fendleriana** Klotzsch. Linnaea **24**: 80. 1851. "New Mexico." *A. Fendler*, 1847, Distr. no. 546. PCBC. ISOTYPE (2).

## EUPHORBIACEAE

**Euphorbia bicolor** Engelm. and Gray. Boston J. Nat. Hist. **5**: 233. 1845. "Near Houston, Texas." *F. Lindeimer 174* (1844). PCBC. ISOTYPE.

**Euphorbia fendleri** Torr. and Gray. Exploration of a Route for the Pacific Railroad, vol. 2, p. 175. 1854. "New Mexico." *A. Fendler*, 1847, Distr. no. 800. PCBC. ISOTYPE (2).

**Euphorbia montanus** var.  $\alpha$  Engelm. U. S. and Mexico Boundary Survey p. 192. 1858. "New Mexico." *A. Fendler*, 1847, Distr. no. 786. PCBC. SYNTYPE.

**Pilinophytum lindheimeri** Engelm. and Gray. Boston J. Nat. Hist. **5**: 232. 1845. "Houston to the Brazos [River], Texas." *F. Lindheimer 171* (1843). PCBC. ISOTYPE.

## FAGACEAE

**Quercus douglasii** var. **novo-mexicana** A. DC. Prodrromus **16**(2): 24. 1864. "New Mexico." *A. Fendler*, 1847, Distr. no. 809. PCBC. SYNTYPE.

## GRAMINEAE

**Aristida fendleriana** Steud. Syn. Pl. Glum. **1**: 420. 1855. "New Mexico." *A. Fendler*, 1847, Distr. no. 973. PCBC. ISOTYPE.

**Aristida longiseta** Steud. Syn. Pl. Glum. **1**: 420. 1855. "New Mexico." *A. Fendler*, 1847, Distr. no. 978. PCBC. ISOTYPE (2).

**Eragrostis fendleriana** Steud. Syn. Pl. Glum. **1**: 278. 1855. "New Mexico." *A. Fendler*, 1847, Distr. no. 932. PCBC. ISOTYPE (2).

**Poa bigelovii** Vasey and Scribn. Contr. U. S. Nat. Herb. **1**: 270. 1893. "New Mexico." *A. Fendler*, 1847, Distr. no. 931. PCBC. ISOTYPE.

## JUNCACEAE

**Juncus oronensis** Fern. Rhodora **6**: 36. 1904. "Alder swamp, Orono, Penobscot Co., Maine." *Fernald 330* (21 July 1892). PSNH. ISOTYPE. (Original publication cites no. 300 as holotype; however this is presumed to be a misprint since the specimen at the Gray Herbarium marked as the type is no. 330 and no specimen bearing no. 300 can be found.)

## LABIATAE

**Monarda lindheimeri** Engelm. and Gray. Boston J. Nat. Hist. **5**: 228. 1845. "Texas." *F. Lindheimer 151* (1843). PCBC. ISOTYPE.

**Scutellaria cardiophylla** Engelm. and Gray. Boston J. Nat. Hist. **5**: 227. 1845. "Near Houston, Texas." *F. Lindheimer 144* (1843). PCBC. ISOTYPE.

## LEGUMINOSAE

**Astragalus cyaneus** Gray. Mem. Amer. Acad. Arts **4**: 34. 1849. "Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 148. PCBC. ISOTYPE (2).

**Astragalus diphysus** Gray. Mem. Amer. Acad. Arts **4**: 34. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 146. PCBC. ISOTYPE.

**Phaca macrocarpa** Gray. Mem. Amer. Acad. Arts **4**: 36. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 160. PCBC. ISOTYPE.

the persistent vestiges of former leaves. The foliage, like the stems, is uniformly whitened with a thick and closely appressed silky-hirsute pubescence; the lowest leaves an inch or more in length, including the long tapering base or petiole, the upper shorter, more sessile, and nearly linear, less than a line in width. Head, rays, &c., very like those of *E. pumilum*. Scales of the involucre somewhat in two series, almost equal. Inner pappus of rather copious, strongly scabrous bristles. — This striking species should probably rank with *E. pumilum* and *E. concinnum* in the section *Stenactis*, *Torr. & Gray, l. c.*, rather than in *Pseuderigeron*.\*

333. *E. CINEREUM* (sp. nov.): bienne? undique molliter cinereo-pilosum; caule e basi ramoso; ramis adsurgentibus apice longe nudis monocephalis; foliis spathulatis vel lineari-oblongis basi attenuatis integerrimis seu radicalibus paucidentatis incisive; ligulis numerosissimis gracilibus (albis nunc purpureo tinctis) involucrem hirsutum duplo superantibus; pappo radii et disci conformi duplici, exteriori coroniformi-squamellato, interiori e setis sub-20 fragilibus deciduis. — Var. *α*. is a dwarf, vernal form, only a span high, quite hoary, the primary flowering stems erect and almost scapiform (no. 374 of the distribution). Dry, exposed places around Santa Fé; May. Var. *β*. has taller and more diffuse stems (10 inches high), the leaves almost lanceolate, entire, the lower tapering into slender petioles. Low, sandy banks of the Rio del Norte and of Santa Fé Creek; May to June. (380.) Var. *γ*. is a larger, coarser, and much more leafy state; from the valley of Santa Fé Creek, near irrigating ditches; May to July. (385.) — The heads are as large as those of *Bellis perennis*, solitary on peduncles, or the naked summit of the stems, of from 2 to 4 inches in length. The species belongs to the first division of the section *Phalacrocoma*, *Torr. & Gray, l. c.*† Some forms of this, or of an allied species (possibly *E. affine*, *DC.*), with rather less numerous and white rays, and either entire or incised leaves, were gathered at Buena Vista and Encantada by Dr. Gregg.

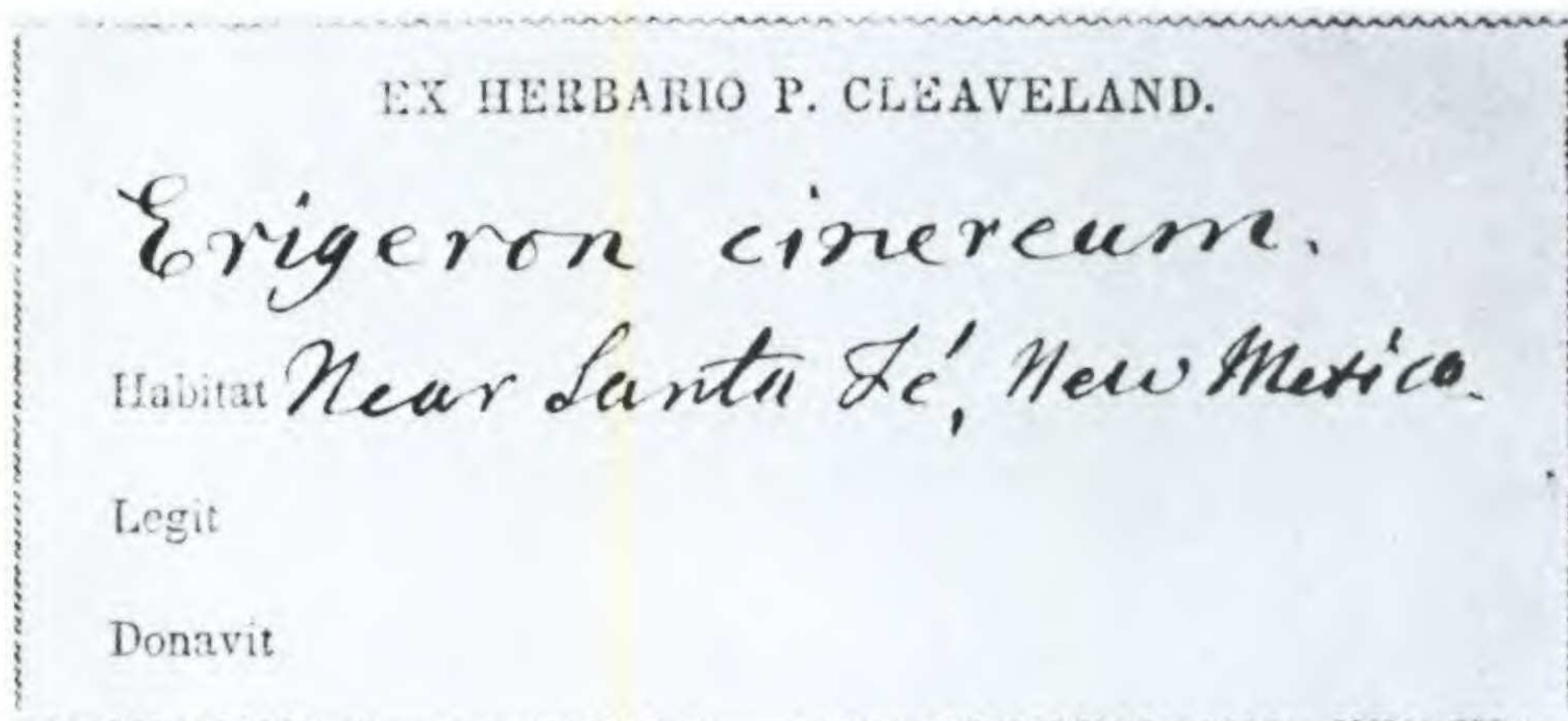
334. *E. FLAGELLARE* (sp. nov.): bienne? striguloso-puberulum, pumilum; caulibus gracillimis e basi ramosis, floriferis seu primariis simplicibus superne aphyllis monoceph-

\* A Texan species which I refer to the same section is probably *Distasis modesta*, *DC.*, although the squamellæ and fragile setæ of the pappus are more numerous than in De Candolle's character.

*ERIGERON MODESTUM*: hirsuto-pubescens, cinereum; caule ramosissimo paniculato-corymboso; ramis monocephalis; foliis subspathulatis linearibusve basi attenuatis imis petiolatis integerrimis; ligulis 30–40 uniserialibus (albis) involucrem canescenti-hirsutum duplo superantibus; acheniis parce pilosulis; pappo radii et disci conformi duplici, exteriori paleaceo-squamellato, interiori e setis fragilibus circiter 12. — *Distasis modesta*, *DC. Prodr. 5. p. 279?* — New Braunfels, Texas, *Lindheimer*.

† From Mr. Lowell's herbarium I find that Dr. Gambell gathered the same species in the vicinity of Santa Fé.

Figure 5. A page from *Plantae Fendlerianae* showing *Plantae Fendlerianae* numbers after no. 296. The numbers in parentheses correspond with Fendler notebook numbers and specimen label numbers (cf. Figure 6).



**Plantae Novo-Mexicanae.**

*No. 374.*

*Erigeron cinereum.*

A. Fendler coll.

1847.

Figure 6. Specimen label bearing no. 374, which corresponds with Fendler's notebook number, not the *Plantae Fendlerianae* number, rather is cited in parentheses with the protolog (cf. Figure 5).

**Phaca picta** Gray. Mem. Amer. Acad. Arts **4**: 37. 1849. "Rio del Norte, New Mexico." *A. Fendler*, 1847, Distr. no. 161. PCBC. ISOTYPE (2).

**Sophora chrysophylla** ssp. **glabrata** (Gray) Chock var. **ovata** Chock subvar. **ovata** Chock forma **maunakeaensis** Chock. Pacific Sci. **10**: 136. 1956. "South slope of Mauna Kea, 2.1 miles north of Humuula, Hawaii." *Chock, Lohman, Hodgdon and Lamberton* 580 (30 August 1952). NHA. PARATYPE.

## LENTIBULARIACEAE

**Utricularia purpurea** Walt. forma **alba** Hellquist. *Rhodora* **76**: 19. 1974. "Southeast of Dorr Pond on N. H. Rt. 153, Wakefield, Carroll Co., New Hampshire." *Hellquist* 8935 (29 August 1972). NHA. HOLOTYPE.

## LINACEAE

**Linum rigidum** var. **puberulum** Gray. *Plantae Wrightianae* **1**: 25. 1852. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 85 (includes coll. nos. 93, 94, 95, 96). PCBC. ISOTYPE (2).

## LORANTHACEAE

**Arceuthobium cryptopodum** Engelm. *Boston J. Nat. Hist.* **6**: 214. 1850. "Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 283. PCBC. ISOTYPE.

**Phoradendron juniperinum** Engelm. Mem. Amer. Acad. Arts **4**: 58. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 281. PCBC. ISOTYPE.

## LYCOPODIACEAE

**Lycopodium annotinum** L. var. **acrifolium** Fern. *Rhodora* **17**: 124. 1915. "Deciduous woods, Dover, Piscataquis Co., Maine." *Fernald* s.n. 22 July 1895. PSNH. ISOTYPE.

## MALVACEAE

**Sidalcea candida** Gray. Mem. Amer. Acad. Arts **4**: 24. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 80. PCBC. ISOTYPE.

## OLEACEAE

**Menodora scabra** Gray. Amer. J. Sci. ser. 2, **14**: 44. 1852. "New Mexico." *A. Fendler*, 1847, Distr. no. 693. PCBC. SYNTYPE.

**Syringa**×**josiflexa** Preston *ex* Pringle. *Baileya* **20**: 96–97. 1977. "Katie Osborne Lilac Garden, Royal Bot. Garden, Dundas, Ontario, received from Kingsville Nurseries, Kingsville, Maryland." *Pringle 1587* (29 May 1975). NHA. PARATYPE.

**Syringa**×**swegiflexa** Hesse *ex* Pringle. *Baileya* **20**: 98. 1977. "Royal Bot. Garden nursery, Dundas, Ontario, received from Agriculture Canada Research Station, Morden, Manitoba." *Pringle 1586* (6 June 1975). NHA. PARATYPE.

## ONAGRACEAE

**Epilobium nesophilum** Fern. var. **lupulinum** Hodgdon and Pike. *Rhodora* **66**: 149. 1964. "East Wolf Island, New Brunswick, Canada." *Hodgdon and Pike 1000* (27 July 1962). NHA. HOLOTYPE.

**Gaura lindheimeri** Engelm. and Gray. Boston J. Nat. Hist. **5**: 217. 1845. "Houston to the Brazos [River], Texas." *F. Lindheimer 61* (1843). PCBC. ISOTYPE.

**Oenothera fendleri** Gray. Mem. Amer. Acad. Arts **4**: 45. 1849. "Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 230 (includes coll. nos. 245, 246). PCBC. ISOTYPE.

**Ludwigia linearis** var. **puberula** Engelm. and Gray. Boston J. Nat. Hist. **5**: 217. 1845. "Houston, Texas." *F. Lindheimer 58* (1843). PCBC. ISOTYPE.

## PAPAVERACEAE

**Argemone hispida** Gray. Mem. Amer. Acad. Arts **4**: 5. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 16. PCBC. ISOTYPE.

## POLYGONACEAE

**Polygonum sagittatum** L. forma **chloranthum** Fern. *Rhodora* **19**: 134. 1917. "Valley of the Cathance River, tidal mud flats of the river, Bowdoinham, Sagadahoc Co., Maine." *Fernald and Long 13559* (14–19 Sept 1916). PSNH. ISOTYPE.

**Sidalcea neo-mexicana** Gray. Mem. Amer. Acad. Arts **4**: 23. 1849. "Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 79. PCBC. ISOTYPE.

## NYCTAGINACEAE

**Abronia fendleri** Standley. Contr. U. S. Nat. Herb. **12**: 324. 1909. "New Mexico." *A. Fendler*, 1847, Distr. no. 739. PCBC. ISOTYPE.

## POLYPODIACEAE

**Cheilanthes fendleri** Hook. Species Filicum **2**: 103. 1858. "New Mexico." *A. Fendler*, 1847, Distr. no. 1015. PCBC. ISOTYPE.

## PRIMULACEAE

**Dodecatheon radicum** Greene. Erythea **3**: 37. 1895. "New Mexico." *A. Fendler*, 1847, Distr. no. 549. PCBC. ISOTYPE.

## RANUNCULACEAE

**Thalictrum fendleri** Engelm. Mem. Amer. Acad. Arts **4**: 5. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 13. PCBC. ISOTYPE.

## RHAMNACEAE

**Ceanothus fendleri** Gray. Mem. Amer. Acad. Arts **4**: 29. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 106a. PCBC. ISOTYPE.

## ROSACEAE

**Potentilla crinata** Gray. Mem. Amer. Acad. Arts **4**: 41. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 199. PCBC. ISOTYPE (2).

**Potentilla diffusa** Gray. Mem. Amer. Acad. Arts **4**: 41. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 198. PCBC. ISOTYPE.

**Prunus gracilis** Engelm. and Gray. Boston J. Nat. Hist. **5**: 243. 1845. "West of the Brazos [River], Texas." *F. Lindheimer* 237 (1844). PCBC. ISOTYPE.



**Rubus allegheniensis** Porter forma **rubrobaccus** Wolfe and Hodgdon. *Rhodora* **53**: 30. 1951. "East Foss Farm, Durham, Strafford Co., New Hampshire." *Wolfe and Hodgdon* 88 (16 August 1949). NHA. HOLOTYPE (on 2 sheets), PARATYPE (3).

**Rubus idaeus** L. var. **nesophilus** Hodgdon and Pike. *Rhodora* **66**: 148. 1964. "Edge of Shingle Beach, South Wolf Island, New Brunswick, Canada." *Hodgdon and Pike* 500 (15 August 1960). NHA. HOLOTYPE.

## SALICACEAE

**Salix coactalis** Fern. *Rhodora* **8**: 22. 1906. "Shore of Penobscot River, Bangor, Maine." *O. Knight* 2019 (17 May, 3 June, 29 August 1906, all on one sheet): *O. Knight* 4814 (8 May, 31 May 1905). PSNH. COTYPE (3 sheets).

**Salix fendleriana** Anders. *Salices Boreali-Americanae* (North American Willow section, p. 8). 1858. "New Mexico." *A. Fendler*, 1847, Distr. no. 816. PCBC. SYNTYPE.

**Salix irrorata** Anders. *Salices Boreali-Americanae* (North American Willow section, p. 11). 1858. "New Mexico." *A. Fendler*, 1847, Distr. no. 812. PCBC. ISOTYPE

## SAXIFRAGACEAE

**Philadelphus microphyllus** Gray. *Mem. Amer. Acad. Arts* **4**: 54. 1849. "Near Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 266. PCBC. ISOTYPE.

## SCROPHULARIACEAE

**Euphrasia purpurea** Desf. var. **randii** Robinson forma **albiflora** Fern. and Wieg. *Rhodora* **17**: 88. 1915. "Turfy crests, Elwell Point, South Thomaston, Knox Co., Maine." *Bissell, Fernald and Chamberlain* 10404 (15 August 1913). PSNH. ISOTYPE.

**Euphrasia purpurea** Desf. var. **farlowii** Robinson forma **iodantha** Fern. and Wieg. *Rhodora* **17**: 189. 1915. "Matinicus Island, Maine." *Norton s.n.* 22 August 1905. PSNH. ISOTYPE.

**Euphrasia williamsii** Robinson. *Rhodora* **3**: 272–273. 1901. "Stony ground and crevices of rocks, Alpine Garden, Mt. Washington, New Hampshire." *Robinson and Williams s.n.* 5 August 1901. NHA, PSNH. ISOTYPE (2).

**Penstemon jamesii** Benth. Proc. Amer. Acad. Arts **6**: 67. 1862. "New Mexico." *A. Fendler*, 1847, Distr. no. 575. PCBC. SYNTYPE.

## SELAGINELLACEAE

**Selaginella rupestris** L. var. **fendleri** Underwood. Bull. Torr. Bot. Club **25**: 127. 1898. "New Mexico." *A. Fendler*, 1847, Distr. no. 1024. PCBC. SYNTYPE (2).

## SOLANACEAE

**Lycium pallidum** Miers. Ill. S. Am. Pl. **2**: 108. 1849–1857. "New Mexico." *A. Fendler*, 1847, Distr. no. 670. PCBC. ISOTYPE.

**Physalis fendleri** Gray. Proc. Amer. Acad. Arts **10**: 66. 1874. "New Mexico." *A. Fendler*, 1847, Distr. no. 683. PCBC. SYNTYPE.

## UMBELLIFERAE

**Cymopterus fendleri** Gray. Mem. Amer. Acad. Arts **4**: 56. 1849. "Santa Fe, New Mexico." *A. Fendler*, 1847, Distr. no. 274. PCBC. ISOTYPE.

The list of Fendler isotypes published by Hehre, Hodgdon and Pike (1972) for the Parker Cleaveland collection was determined by comparing specimens with type localities and collection numbers cited in Wootton and Standley (1915). However, after consulting original descriptions for all our Fendler specimens the following specimens were found to have no type status:

*Sphaeralcea fendleri* A. Gray, *Fendler* 78

*Physalis similis* A. Nels., *Fendler* 575

*Oreocarya fulvocanescens* (S. Wats.) Greene, *Fendler* 632

*Eupatorium fendleri* A. Gray, *Fendler* 347

*Diplopappus ericoides* Torr. and Gray var. *hirtella* A. Gray, *Fendler* 460

*Agroseris purpurea* (A. Gray) Greene, *Fendler* 487

## ACKNOWLEDGEMENTS

We would like to thank especially Dr. Elizabeth Shaw for making available Fendler's original notebooks and helping to interpret Fendler's collection numbers and Gray's distribution numbers. Dr.

Otto Solbrig, Director of the Gray Herbarium, kindly granted permission for us to have Fendler's notebook photographed for Figure 2, which was prepared by Mr. John J. Lupo. We would also like to thank Dr. Shaw and Dr. A. Linn Bogle for reviewing the manuscript.

## LITERATURE CITED

- GRAY, A. 1849. *Plantae Fendlerianae*. Mem. Amer. Acad. Arts **4**: 1-116.  
HEHRE, E., A. R. HODGDON & R. B. PIKE. 1972. The Parker Cleaveland Herbarium of Bowdoin College. *Rhodora* **74**: 80-84.  
WOOTON, E. O. & P. STANDLEY. 1915. *Flora of New Mexico*. Contrib. U. S. Nat. Herb. Vol. **19**.

DEPARTMENT OF BOTANY AND PLANT PATHOLOGY  
NESMITH HALL  
UNIVERSITY OF NEW HAMPSHIRE  
DURHAM  
NEW HAMPSHIRE 03824